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**BEFORE THE PUBLIC UTILITIES COMMISSION**
**OF THE STATE OF CALIFORNIA**

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| Order Instituting Rulemaking to Continue Electricity Integrated Resource Planning and Related Procurement Processes | Rulemaking 20-05-003 (Filed May 7, 2020) |

# OPENING COMMENTS OF PACIFIC GAS AND ELECTRIC COMPANY (U 39 E) ON THE PROPOSED DECISION TO ADOPT THE 2021 PREFERRED SYSTEM PLAN

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## SUMMARY OF COMMENTS AND RECOMMENDATIONS

Pursuant to Rule 14.3 of the California Public Utilities Commission's ("CPUC" or "Commission") Rules of Practice and Procedure, Pacific Gas and Electric Company ("PG&E") provides the following Subject Index of Recommended Changes in support of its comments on the Proposed Decision ("PD"). At a high level, the issues set forth below should be addressed in a final decision adopted by the Commission:

A. The PD should be modified to appropriately account for project viability and feasibility for the proposed energy storage projects at the 115 kilovolt ("kV") systems at the Kern-Lamont and Mesa substations in PG&E's service territory. If adopted, these procurements must be specifically excluded from PG&E's Clean Energy metrics reporting requirements established by Commission's Decision ("D.") 21-11-009.

B. PG&E continues to highlight the need for the California Independent System Operation Corporation ("CAISO") Transmission Planning Process ("TPP") to use a portfolio that closely reflects the load serving entities' ("LSE") planned procurement. Recognizing that the Commission needs to transmit a portfolio as soon as possible for the 2022-23 CAISO TPP cycle, PG&E is supportive of using the proposed preferred system plan ("PSP") portfolio but cautions that some of the transmission upgrades identified by the 2022-23 CAISO TPP will require a future reassessment to avoid stranded transmission investments.

C. PG&E urges the Commission to initiate a stakeholder-driven process in coordination with the resource adequacy ("RA") proceeding to develop a replacement for the 22.5 percent planning reserve margin ("PRM") used for developing the PSP and to establish reliability modelling practices and assumptions to ensure future procurements do not burden California consumers with unnecessary procurement costs. The revised Commission staff analysis for the 38 million metric ton ("MMT") Core Portfolio, with a 22.5 percent PRM results in a loss of load expectancy ("LOLE") of 0.0005 in 2030, which is two

hundred times lower than the typical industry wide planning standard of 0.1 LOLE. The sudden use of a new, more stringent, and unsupported PRM standard is likely to lead to unnecessarily high, energy rates for California consumers.

D. PG&E agrees with the Commission on the need to reform the current integrated resource planning ("IRP") process and to do so now. However, the mere elimination of the Reference System Plan ("RSP") will not address the underlying issues that require a more comprehensive and strategic approach to achieve the result of an efficient and improved process.

E. The September 1, 2022 LSE IRP filing date is already at risk since the Commission has not developed or issued guidance on what should be in the individual LSE plans. PG&E asks the Commission to consider utilizing the LSEs annual resource data submittal, to be submitted in August 2022, in lieu of a 2022 LSE IRP, especially given that the resource data templates appear to be the key data used by the Commission in the IRP process.

F. PG&E recommends that Commission issue guidance to LSEs on any additional information or criteria necessary in this cycle that is statutorily required by the rules promulgated by Senate Bill 350 and allow LSEs until December 1, 2022 to file any such non-data related information or criteria as part of a supplemental filing.

G. In light of recent developments and to accommodate continued growth in the technology, the Commission should not define renewable hydrogen at this time. If it does, the definition should be consistent with the "clean hydrogen" definition recently adopted in the Infrastructure Investment and Jobs Act ("IIJA").

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# OPENING COMMENTS OF PACIFIC GAS AND ELECTRIC COMPANY (U 39 E) ON THE PROPOSED DECISION TO ADOPT THE 2021 PREFERRED SYSTEM PLAN

## I. INTRODUCTION

Pursuant to Section 14.3 of the California Public Utilities Commission's ("Commission") Rules of Practice and Procedure, Pacific Gas and Electric Company ("PG&E") submits these opening comments on the Proposed Decision of Administrative Law Judge ("ALJ") Fitch issued on December 22, 2021 ("PD"). A detailed discussion of the comments is provided in Section II. Appendix A offers PG&E's recommendations for changes to the Findings of Fact, Conclusions of Law, and Ordering Paragraphs sections of the PD.

PG&E supports the Commission's PD to adopt the 2021 PSP that meets a statewide 38 MMT greenhouse gas ("GHG") target for the electric sector in 2030 for use by the CAISO for the 2022-23 TPP. The CAISO's reliability analysis in the TPP is an important next step to ensure that the portfolio to achieve a 38 MMT GHG target can support the CAISO system's operation reliably.

## II. DISCUSSION OF PG&E'S OPENING COMMENTS

### A. The PD Should Be Modified to Appropriately Account for Project Viability and Feasibility for the Proposed Energy Storage Projects in the PG&E Service Territory

As a general matter, PG&E supports the use of energy storage projects serving as an alternative solution to transmission system upgrades, if the energy storage projects prove to be more cost-effective and adequately address reliability issues identified by the CAISO. In that same vein, the Commission appropriately outlined in Conclusions of Law 17 in the PD that it is important for LSEs to take into account project viability and feasibility, including other items

such as access to the transmission system, deliverability, and project developer experience and financing, as part of the procurement process.[1/] In other words, to operate effectively as an alternative solution, careful analysis must be performed to determine the feasibility of these energy storage projects while maintaining reliability of the system. PG&E believes that energy storage projects should be pursued when such projects are more cost-effective for customers, which entails a full review of all associated costs, including both project-wide capital costs and interconnection costs, among others.[2/]

From a pragmatic standpoint, the CAISO's interconnection queue provides a picture of projects, including energy storage projects, that may be viable and feasible to be brought online in the near term.[3/] In its recent review, PG&E has not identified energy storage projects in the CAISO's interconnection queue that can meet the online dates proposed in the PD for either the 115 kV system at the Kern-Lamont substation or the Mesa substation. The expected online dates are further challenged by the fact that CAISO's application window will not reopen until April 2023.[4/] Accordingly, procurement of energy storage projects as a near-term transmission alternative solution is likely not feasible.

In consideration of the factors referenced above and given that the CAISO's cost effectiveness analysis on these energy storage projects is incomplete (e.g., only the interconnection cost was included and not the full capital cost of the project), the PD should be

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1/ PD, p. 127 and Conclusions of Law 17.

2/ While the specific energy storage projects and associated timelines highlighted in the PD do not appear feasible for the reasons discussed further below, PG&E is strongly supportive of non-wires alternatives and for identifying creative engineering and market solutions for these investments. In lieu of addressing these alternatives through comments, PG&E believes that there may be more effective ways to identify, evaluate, and prioritize such alternatives, such as through a collaborative process involving both the Commission and CAISO.

3/ *See* CAISO's Resource Interconnection Management System at https://rimspub.caiso.com/.

4/ *See* CAISO's Supercluster Interconnection Procedures, p. 3 at http://www.caiso.com/Documents/FinalProposal-SuperclusterInterconnectionProcedures.pdf

modified to: (1) direct CAISO to move forward with the transmission upgrade process on the 115 kV system at the Kern-Lamont substation or, alternatively, if the transmission upgrades can be placed on hold without compromising reliability, the Commission should determine a later online date for the proposed energy storage project after the CAISO completes its Phase 1 study and (2) hold off on energy storage procurement at the Mesa substation at this time to allow the CAISO and PG&E to consider alternatives (e.g., spare transformer or a third transformer) in the 2022-23 CAISO TPP cycle upon reopening of the CAISO's application window.

Additionally, critically important for PG&E is that the timeline proposed by the PD to bring the Kern-Lamont energy storage project online presents a significant risk of failing to demonstrate progress with certain Safety Operational Metrics ("SOM") as required by the Commission's D.20-05-053 and as established by the Commission in D.21-11-009. Among the metrics adopted in that decision was the Clean Energy metric, which specifically measures progress toward PG&E's procurement obligations as ordered by the Commission in this proceeding, including procurements already ordered pursuant to D.21-06-035, D.19-11-016, and any subsequent decisions. [5/]

As a result, PG&E would be obligated to report its progress toward procurement of the proposed Kern-Lamont energy storage project, as required by D.21-11-009. As it stands now, the Commission's proposed timeline for Kern-Lamont project (online by summer 2023) is likely to result in a report of limited or no progress in achieving the procurements, creating unintended consequences for PG&E despite making efforts to meet the highly expedited timeline for the energy storage project. As such, PG&E emphatically requests that, should the Commission order procurement of the energy storage project, it expressly exempt this procurement from the Clean Energy metric compliance requirement established by D.21-11-009.

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5/ D.21-11-009 (November 9, 2021), p. 99.

### 1. For the Kern-Lamont substation, the PD should be modified to move forward with the transmission upgrade process or move the proposed online date for the proposed energy storage project after CAISO completes its Phase 1 study

PG&E supports the use of the central procurement entity ("CPE") as adopted in D. 20-06-002 to procure local resources to meet local area reliability needs, as is the case for the 95-megawatt ("MW") Kern-Lamont energy storage project. However, the PD does not fully account for the CAISO's current interconnection queue with respect to the requirement that the energy storage project be brought online by summer of 2023.[6/] Table 1 is a current listing of projects in the CAISO's interconnection queue for the 115 kV Lamont substation.

**Table 1 – Current Listing of Projects for the 115 kV Lamont Substation**

| Project Name | Resource Type | Capacity (MW) | Requested Online Date | Interconnection |
|---|---|---|---|---|
| Redwood Solar Farm | Solar | 90 | April 2022 | Lamont Substation 115 kV |
| Second Fiddle | Solar Thermal | 100 | October 2023 | Lamont Substation 115 kV |
| Thunder | Hybrid/Co-Located | 100 | December 2024 | Lamont Substation 115 kV |
| Eiger Energy Storage | Storage | 100 | January 2025 | Lamont Substation 115 kV |
| Estrada Storage | Storage | 100 | June 2025 | Lamont Substation 115 kV |
| Breckenridge | Storage | 75 | June 2025 | Lamont Substation 115 kV |

As illustrated by the table above, none of the potential transmission alternative solutions above 95 MWs in the interconnection queue can meet the proposed online date of summer of 2023. Only two stand-alone energy storage projects of sufficient size are in the queue (i.e., Eiger Energy Storage and Estrada Storage), but they are not expected to come online until January 2025 and June 2025, respectively.

Additionally, the CAISO's cost-effectiveness assessment is incomplete and it is therefore premature to conclude that the proposed energy storage project is in fact more cost-effective than

6/ *See* CAISO's Public Queue Report at https://rimspub.caiso.com/, last visited on January 10, 2022.

the transmission upgrade solution. This cost-effectiveness assessment did not incorporate the full capital cost of the energy storage projects (Eiger Energy Storage and Estrada Storage) nor did it account for the proposed solar thermal (Second Fiddle) and/or hybrid/co-located (Thunder) resources that are also within the CAISO's interconnection queue.[7/] As a result, it may be prudent for the CAISO to move forward with the transmission upgrade process as suggested in the PD, or, if the transmission upgrades can be placed on hold without compromising reliability, the Commission should specify a later online date for the proposed energy storage project after the CAISO completes its Phase 1 study. There is clear information to know that bringing the energy storage project by the summer of 2023 is not feasible, but it is premature to determine an appropriate alternative online date at this time. PG&E notes that the requested online dates in the interconnection queue are dates requested by the project developers and the viability and feasibility of these dates should be determined after the CAISO completes its Phase 1 study. As outlined in Conclusions of Law 17 in the PD, it is critical that procurement orders account for viability and feasibility given project availability, deliverability study timelines, existing supply chain constraints, and the requested online dates by project developers.

Should the Commission elect to move forward with the procurement of energy storage at the Kern-Lamont substation and move the online date as suggested by PG&E to account for project viability and feasibility, PG&E requests that the PD be modified to provide additional

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7/ *See* CAISO's 2020-2021 Transmission Plan, p. 442, stating: "The cost of this option was compared against several options, including reconductoring of the 115 kV lines, and was determined to be the lowest cost based on CPUC recommendation of including only the interconnection cost and not the full capital cost of the energy storage projects that are otherwise needed for system capacity purposes according to the CPUC-provided resource portfolios." It is PG&E's understanding that the cost effectiveness analysis assumed the energy storage project would be brought online as part of the D.21-06-035 procurement order and used by an LSE to meet their procurement obligations. Thus, the incremental capital costs from a CAISO perspective would be *de minimus*. This may no longer be the case given the CAISO's interconnection queue and the targeted online dates in D.21-06-035. Accordingly, the full capital cost of the energy storage project should be considered as part of the cost effectiveness analysis.

authority to deviate from the CPE's all-source solicitation process as required in D.20-06-002 to explicitly target the identified need and allow the CPE to appropriately account for the total costs of the energy storage project, including any interconnection costs, in comparison to the transmission upgrades to determine the most cost-effective solution to address CAISO's reliability concerns.

In order to adopt this change, PG&E recommends that the Commission add or modify the Findings of Fact, Conclusions of Law and Ordering Paragraphs, as reflected in Appendix A.

### 2. For the Mesa substation, the PD should be modified to hold off on energy storage procurement at this time and allow CAISO and PG&E to consider additional alternatives

Similar to the 115 kV Kern-Lamont substation, a review of the CAISO's current interconnection queue indicates that the procurement of energy storage projects at the 115 kV Mesa substation by the end of 2022 is highly unlikely. At the current time, there are no projects in the queue that will interconnect at the 115 kV Mesa substation.[8/] Given that the CAISO's application window will not reopen until April 2023, it is not feasible for a project to be brought online for several years.[9/] While there are three energy storage projects interconnecting at the 230 kV system, these projects are not expected to address CAISO's reliability concerns at the 115 kV system.[10/] For these reasons, PG&E strongly believes that the Commission should reconsider the procurement of an energy storage project at the 115 kV Mesa Substation at this

8/ *See* CAISO's Public Queue Report at https://rimspub.caiso.com/, last visited on January 10, 2022, indicating that the Black Bear energy storage project withdrew from the interconnection queue on May 28, 2021.

9/ PD, p. 158.

10/ *See* CAISO's 2020-2021 Transmission Plan, pp. 117-119. CAISO broke down the original scope into three projects: (1) South of Mesa Upgrade - Minor 115 kV reconductor and reactive support (proceeding), (2) North of Mesa Upgrade - New 230 kV source (on-hold), and (3) Mesa 115 kV Energy Storage Procurement - Install approximately 50 MW/200 MWh at Mesa 115kV substation to address maintenance window and utilize local under voltage load shed/remedial action scheme for peak load conditions.

time. PG&E recommends that the Commission hold off until April 2023 on mandating energy storage procurement at the 115 kV Mesa Substation to allow the CAISO and PG&E to consider additional alternatives in the 2022-23 CAISO TPP cycle once the CAISO's application window is reopened.

In order to adopt this change, PG&E recommends that the Commission add or modify the Findings of Fact, Conclusions of Law and Ordering Paragraphs, as reflected in Appendix A.

### B. PG&E Highlights Again the Need to Use Updated LSE Planned Procurement Portfolios for the CAISO TPP to Avoid Stranded Transmission Investments

The CAISO TPP should be informed by the most updated LSE procurement portfolios to avoid the inefficiency and unnecessary costs of stranded transmission investments. PG&E previously pointed out in its opening comments to the ALJ Ruling on the PSP[11/] that the PSP uses outdated LSE procurement portfolios from the 2020 IRP filings, which does not take into account location-specific resource requirements as evidenced by the imbalance split of resources between Northern and Southern California.[12/] As it currently stands, there is a significant risk of approving unnecessary transmission upgrades because actual LSE planned procurement portfolios are different from the PSP portfolio that will be used to inform the 2022-23 CAISO TPP. To mitigate this risk, PG&E in its opening comments on the ALJ Ruling had recommended that the Commission transmit at least one portfolio that uses a more geographically balanced split of resources for consideration in the CAISO TPP.

Since the September 2020 LSE IRP filings, changes have occurred that have substantially modified individual, as well as aggregated LSE portfolio compositions. First, the Power Charge Indifference Adjustment ("PCIA") working group decision that was adopted allocates

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11/ *Opening Comments of Pacific Gas and Electric Company (U39E), on Administrative Law Judges's Ruling Seeking Comments on the Proposed Preferred System Plan*, dated September 27, 2021, pp. 3, 12.

12/ The majority of new resources are in Southern California. For example, in 2030, out of approximately 34,000 MW of cumulative incremental renewable and storage capacity additions, approximately 28,600 MW are located in in Southern California. This is not realistic. LSEs will procure resources across the CAISO system to meet other aspects of resource needs (e.g., local).

Renewables Portfolio Standard attributes to departing load customers, likely altering LSE bundled service portfolio needs over the IRP planning horizon.[13/] Second, the mid-term reliability ("MTR") procurement order directs Commission-jurisdictional LSEs to procure 11,500 MW of new resources that has not been accounted for in the September 2020 LSE IRP filings. Third, the methodology of creating the PSP and assumptions used has resulted in a 2030 portfolio greater than that necessary to meet reliability requirements (see discussion in Section II.C below), which has created a misalignment with the MTR procurement decision (D. 21-06-035). Furthermore, PG&E presented its independent analysis in its opening comments to the ALJ Ruling that a more accurate representation of the MTR procurement and LSEs' location-specific procurements will lead to a different PSP portfolio.[14/]

Recognizing that the Commission needs to transmit to CAISO a portfolio as soon as possible for the 2022–23 CAISO TPP cycle, and the constraint around time to develop a second portfolio, as an interim solution, the Commission may use the proposed PSP portfolio for the current cycle with the acknowledgement that some of the transmission upgrades that may be identified by the 2022–23 CAISO TPP will require a secondary assessment in the future to avoid the risk of resulting stranded transmission investments.

### C. The Commission Needs to Initiate a Stakeholder-Driven Process in Coordination with the RA Proceeding to Establish a Reliability Planning Standard

Despite clear evidence[15/] that a 22.5 percent PRM will lead to a LOLE standard much lower than the 0.1 LOLE industry standard and the changing RA paradigm (D. 21-07-014),[16/] the PD fails to develop an appropriate path forward to update the PRM. The continued use of an

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13/ D.21-05-030 (May 20, 2021) in R.17-06-026.

14/ https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M410/K159/410159790.PDF.

15/ The revised Commission staff analysis of the 38 MMT Core Portfolio with the enforcement of a 22.5 PRM results in a LOLE of 0.0005 in 2030, much lower than the typical industry wide planning standard of 0.1 LOLE.

16/ Failing to include a plan for updating the PRM given the changes in the RA paradigm set for 2024 could impact the effectiveness of the IRP. If the IRP and System RA are not aligned, system shortages or excesses will become apparent too late, increasing customer costs (e.g., reliability-must-runs for specific units, procurement in excess of LOLE reliability planning standard). Alignment between the proceeding should prevent such scenarios.

unsupported 22.5 percent PRM will lead to unnecessarily higher energy rates for California consumers and potentially creates a divergence in the IRP and RA proceedings.

PG&E again here urges the Commission to immediately start a new stakeholder initiative to develop a suitable and data-driven PRM with reliability modelling standards to ensure future procurements do not burden California consumers with unnecessary excess costs and ensures alignment with the changing RA paradigm. Below, PG&E provides a potential approach for revising the reliability planning standard in a stakeholder-driven process.

1. **Establish a LOLE Reliability Metric:** A 0.1 LOLE (1-in-10 or 1 event in 10 years) is a commonly used industry standard. However, given the focus on reliability, it is prudent to engage in an appropriate process to evaluate or confirm that a 0.1 LOLE is an acceptable metric for RA planning in California. Changing such a wide accepted and critical standard requires a multi-agency, multi-stakeholder process to weigh the costs and benefits of such a far-reaching change.
2. **Develop and Validate Modelling Assumptions for LOLE Studies:** PG&E believes this should be a stakeholder-driven process, allowing stakeholders to vet inputs and assumptions.[17/] The Commission's latest SERVM model is adequately setup to be used as a starting point for validating and updating modelling assumptions.
3. **Perform Simulations Analysis to Identify Incremental Resource Need:** Analysis should include resource location and attributes, and the latest renewable energy production curves to meet the established reliability metric. See PG&E's opening comments to the ALJ Ruling on the PSP for details.[18/]
4. **Translate into an Easy-to-Implement Procurement/Counting Criteria to Meet the Established LOLE Metric:** For example, today's planning metric sets a 15 percent PRM over a 1-in-2 load forecast and counts resources using various qualifying capacity methodologies, including an ELCC-based methodology for solar and wind resources. This criterion may change as a result of work related to D. 21-07-014.[19/]
5. **Re-validate in Future Years**: Establish an appropriate process and cadence to revisit and repeat the analysis in the IRP planning process so the procurement/counting criteria remains aligned with future procurement decisions.

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17/ As also noted by the SCE in ALJ Ruling reply comments, only with a stakeholder process vetting inputs and assumptions will there be an understanding of appropriate and consistent processes for LOLE reliability modeling in the IRP proceeding.

18/ https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M410/K159/410159790.PDF

19/ *See* D.20-07-014, p. 52, establishing workshops to cover implementation details on resource counting, among other items.

### D. PG&E Agrees with the Commission on the Need to Reform the IRP Process and to Do So Now; However, Mere Elimination of the RSP Alone will not Properly Address All the Shortcomings of the Current IRP Process

PG&E supports the Commission's efforts to take immediate steps to reform the IRP process to address the various shortcomings marring the current process, however, PG&E is concerned that a mere elimination of the RSP alone falls short of the type of comprehensive reform needed to upright the process. The originally intended IRP process—where LSE procurements informs the development of a transparent and objective RSP that forms the basis for individual LSE plans that the Commission then aggregates to create a PSP to provide procurement direction to LSEs—does not reflect reality. Instead, an alternative and "questionable" IRP process has been operating with limited transparency and has thus far driven the procurement decisions for several years now. In this stance, the Commission has not fully considered the collective efforts, inputs and recommendations of LSEs and other stakeholders, has failed to utilize existing standards and practices, and has instead relied on a short-term fix approach to ordering procurements of new resources and has failed to identify the appropriate locations for such new resources to properly balance the State's resource mix to achieve the intended system reliability. This approach has been evidenced by the waves of emergency and other off-cycle IRP procurement orders in recent years that has, for the most part, disregarded the analyses and input of LSEs and other stakeholders. It is important that this "questionable" IRP process is reformed comprehensively and does not drive future procurement decisions. It is time to take a more inclusive, transparent, and industry standard informed approach to the IRP process, one that will benefit from the input and recommendations of LSEs and other stakeholders, be informed and guided by appropriate standards and practices, and avoid the costly and disruptive emergency and off-cycle procurement orders.

PG&E also request that the Commission clarify its statements explaining the reasons for abandonment of the regular development of an RSP. In that regard, the PD states that "in order to accommodate the additional work that needs to occur within the IRP context, at this time we will reform the IRP two-year cycle to focus on adoption of a PSP every two years."[20/] PG&E seeks

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20/ PD, p. 69.

to clarify that "the additional work" in the PD is intended to address the issues of, "*locational analysis, retention of needed existing resources, potential for additional resource retirements, as well as development of a programmatic approach to procurement to achieve GHG emissions targets while maintaining reliability.*"[21/] Although the PD provides some examples of the RSP efforts that will be retained (e.g., inputs and assumptions update), the PD is vague about when these activities will take place and how the Commission will integrate the issues identified in the PD with future efforts such as LSE filings and PSP development.

While PG&E is very supportive of the Commission's focus on the additional work, given the timeline proposed by the PD, it appears that the Commission is making a hasty decision on IRP process reforms. The last two IRP cycles have demonstrated that the IRP process is unable to yield an integrated plan that addresses the above issues while achieving State policy goals, despite taking more time to complete than originally scheduled for the process. The outcome has not been efficient or beneficial for LSEs. Moreover, the sequence of procurement orders that have been issued over the course of the last few IRP cycles have not been tied to either the PSP or RSP. Finally, LSE plans and relative LSE need have not served as the basis for the procurement allocations in such procurement orders, instead allocating the procurement on a load-share basis. The likely result is an unfair shifting of reliability costs form some LSEs to others.

To avoid new sets of issues due to a hasty decision to eliminate the RSP, PG&E recommends that asks the Commission initiate a comprehensive stakeholder process focused on redesigning the IRP process in an effective and meaningful way. This stakeholder effort should first identify all of the gaps in the current IRP process and only then should the Commission adopt appropriate and necessary reformation measures to address those gaps.

### E. The 2022 LSE IRP Filing Schedule is Already at Risk Since the Commission has Not Yet Issued Guidance on the Criteria for the Plans.

The 2022 LSE IRP filing schedule is at risk since the Commission has not yet issued guidance to LSEs on the scope of the plans required to be filed with the Commission. PG&E

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21/ PD, p. 68.

agrees with the California Community Choice Association ("CalCCA")[22/] that the LSEs' IRP filing deadline should not be fixed for September 1, 2022 unless the IRP filing requirements are made final and issued in January. The PD does not provide any guidance for the schedule to finalize the key elements[23/] of the LSE plans, including the much-needed effort to establish a reasonable replacement for the 22.5 percent PRM requirement. In addition, and as demonstrated by the last two IRP cycles, there remain significant gaps in appropriately using the LSE plans to inform Commission ordered procurement mandates.

The establishment of a filing deadline should be supported by a reasonable timeline leading up to the filing of individual LSE plans. Equally important is better planning by the Commission on how LSE plans will be used to support statewide integrated planning efforts and any resulting procurement orders.

PG&E observes that the resource data template, submitted annually on August 1, is the key data used by the Commission in the IRP. PG&E recommends that:

(1) the Commission eliminate the requirement that LSE plans be filed on September 1, 2022;

(2) instead of developing LSE plan filing requirements by May 1, 2022, the Commission should initiate a stakeholder process to evaluate what information is needed, *beyond what will already be included in the August 1 resource data template submissions*, and issue guidance to LSEs for additional information filing requirement ; and

(3) the Commission should extend the deadline to December 1, 2022, for supplying the needed information *beyond what will be included in the August 1, 2022 resource data template submissions*.

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22/ *California Community Choice Association's Reply Comments on Administrative Law Judge's Ruling Seeking Comments on Proposed Preferred System Plan*, dated October 11, 2021,.pp. 12–13.

23/ *e.g.*: IRP narrative template, IRP Input and Assumptions, GHG and Reliability Planning Standards for individual LSE plans, CSP Tool assumptions and updates.

### F. The Commission Should Not Adopt an Interim Definition for Renewable Hydrogen at This Time.

PG&E appreciates the Commission for its work in the PD to consider a definition of renewable hydrogen for the purposes of IRP procurement. However, recent changes to federal legislation means that previous comments on the definition of "renewable hydrogen" as originally proposed in the August 17, 2021 ALJ Ruling, which relies on the SGIP definition, are now out of date.[24/] The United States Congress passed the IIJA or "Bipartisan Infrastructure Bill" on November 15, 2021, which lays a foundation for a national clean hydrogen strategy and roadmap.[25/] The IIJA clean hydrogen definition will open the door for production of hydrogen from the grid and other sources in the short-term as the nascent hydrogen market ramps up, the grid becomes cleaner, and the costs of production decreases to an affordable level. As a result, the interim definition for "renewable hydrogen" in the PD is now overly restrictive and burdensome and will stifle growth of the hydrogen market in California to the detriment of the State's overall decarbonization goals as laid out in Senate Bill 100 and may also hamper California's ability to work toward decarbonization with neighboring states interconnected to the California electric grid and natural gas system.[26/]

As the Commission correctly stated, "it is not necessary" for the Commission "to adopt a definition for renewable hydrogen in this decision."[27/] Given the federal development of a definition for "clean hydrogen," and the State's efforts to develop a comprehensive and permanent definition for clean or renewable hydrogen, a short-term salient definition for clean or renewable hydrogen at this time may create more uncertainty counter to the Commission's intentions for interim clarity.

PG&E recognizes its current departure from its previous advocacy on this issue given the federal definition and other developments surrounding this technology, and points to the potential benefits that a nationwide, comprehensive, and longer-term framework would provide

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24/ Administrative Law Judge's Ruling Seeking Comments on Proposed Preferred System Plan, dated August 17, 2021 at 39-42.

25/ Infrastructure Investment and Jobs Act (H.R. 3684), which became law on November 15, 2021.

26/ Senate Bill 100 (De Leon), 2018.

27/ PD, at 166.

to both Californians and all other states. Adopting the federal definition also facilitates greater hydrogen development by opening the field to new developers that may not otherwise have access to, or the expertise on, renewable energy procurement from generators and renewable energy credits. Additionally, adopting the federal definition brings treatment of hydrogen closer in line with how energy storage is treated overall, which generally can charge from the grid unless otherwise specified. To that end, should the Commission be inclined to adopt a definition in this decision, the Commission should align its renewable hydrogen definition and hydrogen strategy with the IIJA. Specifically, the Commission should:

1. Define "clean hydrogen," not "renewable hydrogen," as: "Hydrogen produced with a carbon intensity equal to or less than 2 kilograms of carbon dioxide-equivalent produced at the site of production per kilogram of hydrogen produced."[28/]
2. Take note of two mandates in the IIJA:
    a. National Clean Hydrogen Strategy and Roadmap – directs the development of the first US national strategy to facilitate a clean hydrogen economy[29/]
        i. Secretary shall develop a technologically and economically feasible national strategy and roadmap to facilitate widescale production, processing, deliver, storage, and use of clean hydrogen.
        ii. To be updated every 3 years.
    b. Clean Hydrogen Production Qualifications – directs the development of a clean hydrogen production carbon intensity standard[30/]
        i. Secretary shall award grants for research, development, and demonstration projects to advance new clean hydrogen production, processing, delivery, storage, and use equipment manufacturing technologies and techniques.
        ii. To begin no later than 3 years following enactment and recurring every 4 years thereafter.

In order to adopt this change, PG&E recommends that the Commission add or modify the Findings of Fact, Conclusions of Law and Ordering Paragraphs, as reflected in Appendix A.

28/ (IIJA, Sec. 822(b)(1)(B)).
29/ (IIJA, Sec. 814(a).
30/ (IIJA, Sec. 822).

## III. CONCLUSION

PG&E respectfully requests that the Commission adopt the recommendations presented herein.

Respectfully Submitted,

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## APPENDIX A

### Proposed Changes to Findings of Fact, Conclusions of Law, and Orders to Proposed Decision of ALJ Fitch

Pursuant to the Commission's Rules of Practice and Procedure Section 14.3, this attachment shows PG&E's proposed changes to the PD's Findings of Fact, Conclusions of Law and Orders to the PD with deletions in strikeout and additions in bold and underlined. PG&E has included only the paragraphs in which it proposes changes.

**Findings of Fact**

**New Findings of Fact: Good cause exists for the Commission to reform the current IRP process beyond eliminating the Reference System Plan, when the resource specific data provides the necessary inputs for the Commission's IRP process and the CAISO's Transmission Planning Process.**

**New Findings of Fact: Key elements of the individual LSE IRP not related to resource specific data provided to the Commission on August 1, 2022, are suitable for a supplemental filing due by December 1, 2022 so that the Commission can certify the IRP process under the statutory rules promulgated by Senate Bills 350.**

Findings of Fact 23. The CAISO's 2020-2021 TPP identified two storage projects as preferred alternatives to two previously-approved transmission upgrades~~.~~**, however, the cost-effectiveness analysis in the CAISO's 2020-2021 TPP did not include all applicable costs.**

**New Findings of Fact: On November 15, 2021, the US Congress adopted a federal definition of clean hydrogen as part of the Infrastructure Investment and Jobs Act: "Hydrogen produced with a carbon intensity equal to or less than 2 kilograms of carbon dioxide-equivalent produced at the site of production per kilogram of hydrogen produced."**

**New Findings of Fact: There are no energy storage projects currently in the CAISO's interconnection queue that could provide viable and feasible solutions for either the Kern-Lamont substation by the summer of 2023 or the Mesa substation within the next 36 months.**

**New Finding of Fact: The CAISO's application window does not reopen until April 2023.**

**New Findings of Fact: The Black Bear energy storage project, which was planned to interconnect to the 115 kV Mesa substation, withdrew from the CAISO interconnection queue on May 28, 2021.**

**New Findings of Fact: The PSP portfolio transmitted to the CAISO for the 2022-23 TPP represents LSE plans filed in 2020 and does not capture updates to the LSE plans meet recent mandates and policy changes.**

**Conclusions of Law**

Conclusions of Law 7. **The Commission should identify areas of gap in the current IRP process and redesign the process to address those gaps to mitigate the risk of creating a new IRP process that will not address all the current issues the process** ~~**but should focus** each cycle **on the development and adoption of** a PSP. **An RSP may be evaluated and adopted, as needed by policy circumstances, such as when CARB updates its climate change scoping plan, or when other circumstances warrant**~~.

Conclusion of Law 10: ~~LSEs should be required to include planning information in their next individual IRP filings in 2022 out through 2035~~ **It is reasonable to use the LSEs resource data due August 1, 2022 in lieu of a full-fledged 2022 LSE IRP, and then submit key elements of the LSE Plan that are necessary in order to ensure compliance with the requirements of Senate Bill 350 on December 1, 2022.**

Conclusions of Law 26. PG&E should **not** be required to procure the two storage projects identified in the 2020-2021 TPP as preferable alternatives to transmission upgrades **until further analysis, including a comprehensive cost analysis and review of feasible projects in the CAISO queue, demonstrates these projects as feasible and viable transmission alternatives. Upon the completion of the CAISO's Phase 1 study and further analysis, the Commission may direct PG&E to procure the two energy storage projects.** In order to accomplish this, PG&E should be allowed to deviate from all-source procurement requirements in order to

develop the particular storage needs identified in the TPP at the Kern-Lamont Substation and the Mesa Substation. For the Kern-Lamont project, PG&E should conduct the procurement as the CPE according to D.20-06-002, because the project is in a local area. For the Mesa project, PG&E ~~may be~~ **is** allowed to forego procurement **at this time as no** ~~if a suitable~~ **viable or feasible** project **exists.** ~~has already been procured as part of MTR procurement.~~

Conclusions of Law 27: The Commission should ~~not~~ adopt a~~n interim~~ **permanent** definition of renewable hydrogen in a future Commission decision in this proceeding**.** ~~Instead, should it wish to adopt a definition, it~~ **Any action in this decision should adopt the federal definition of clean hydrogen** to send a signal to developers and LSEs in the event of eligibility for future procurement requirements.

**New Conclusions of Law. The CAISO's cost-effectiveness analysis in the CAISO's 2020-2021 TPP did not include all applicable costs and, thus, is incomplete.**

**New Conclusions of Law: Ordering energy storage procurement for the 115 kV Mesa substation prior to April 2023 will not result in any successful projects being built.**

**New Conclusions of Law: Ordering energy storage procurement for the 115 kV Kern-Lamont substation to come online by the summer of 2023 will not result in any successful projects being built.**

**Ordering Paragraphs**

Ordering Paragraph 11. **If further analysis demonstrates that energy storage procurement is a prudent and feasible transmission alternative,** Pacific Gas and Electric Company (PG&E) shall conduct a competitive solicitation for the 95 megawatt four-hour storage project at the Kern-Lamont Substation identified in the California Independent System Operator's 2020-2021 Transmission Planning Process as the Central Procurement Entity under the process established in Decision 20-06-002. ~~PG&E shall submit the results of its progress in a 2 Advice Letter by no later than August 1, 2022.~~ **This energy storage procurement shall be specifically and categorically excluded from Pacific Gas and Electric Company's Clean Energy metric reporting requirements established by the Commission's Decision 21-11-009.**

Ordering Paragraph ~~**12. Pacific Gas and Electric Company (PG&E) shall file a Tier 1 Advice Letter by April 1, 2022 explaining whether a storage project has been procured as part of the procurement required by Decision 21-06-035 to be online by the end of 2022, and otherwise meeting the operational requirements identified in the California Independent System Operator's 2020-2021 Transmission Planning Process for a 50 megawatt four-hour storage project at the Mesa Substation as a transmission alternative. If a suitable project has not been identified by April 1, 2022, then PG&E shall conduct a solicitation and file a Tier 2 Advice Letter by the end of 2022 proposing a storage project that will meet the identified need and may seek cost recovery via the cost allocation mechanism but then shall not count the storage toward its procurement required in Decision 21-06-035.**~~

Ordering Paragraph 13. The following definition of ~~**renewable**~~ **clean** hydrogen is adopted**, instead of a renewable hydrogen definition**, on an interim basis for any eligible procurement associated with this proceeding, until a uniform state definition is available: "Eligible ~~**renewable**~~ **clean** hydrogen fuel is hydrogen produced **with a carbon intensity equal to or less than 2 kilograms of carbon dioxide-equivalent produced at the site of production per kilogram of hydrogen produced. This definition is aligned with the Infrastructure Investment and Jobs Act ("IIJA" or "Bipartisan Infrastructure Bill") Sec. 822(b)(1)(B).** ~~**at a project site, or delivered to a project site by a vehicle or dedicated pipeline, that was produced through non-combustion thermal conversion of biomass, or electrolysis using 100 percent renewable electricity, as defined by the Renewables Portfolio standard, excluding purpose-grown crops. If the electricity is not generated on site, the generating facility is required to provide documentation to the procuring load serving entity that bundled renewable energy credits were retired for the electricity used to generate the renewable hydrogen used in the facility.**~~

**New Ordering Paragraph: The Energy Division staff shall initiate a stakeholder process for the revision of the 22.5 percent PRM. Future IRP efforts will use the revised PRM for LSE plan filings and PSP/RSP development.**

**New Ordering Paragraph 4: All load-serving entities named in Table 1 of this order, plus the individual electric service providers who will receive their individual allocations confidentially from Commission staff, shall file resource data submittals by August 1, 2022 in a form determined by the Commission's Energy Division. Key elements of the individual LSE Plans that are necessary for ensuring compliance with the requirements of Senate Bill 350 shall be filed on December 1, 2022.**